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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Tomohiro Aikawa

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MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.

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SUITE 370

ALEXANDRIA, VA 22314

EXAMINER

RAO, ANAND SHASHIKANT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/721,885	Applicant(s) AIKAWA ET AL.	
	Examiner Andy S. Rao	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7,9,12,14 and 16-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7,9,12,14 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/20/08 has been entered.
2. Applicant's arguments filed on 2/20/08 with respect to 1, 3-5, 7, 9, 12-, 14 (amended) and 16-19 (newly added) have been fully considered but they are not persuasive.
3. The Applicant presents two arguments contending the previous rejection of claims 1, 3-7, 9-10, 12, 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Aharoni et al., (hereinafter referred to as "Aharoni"), as was set forth in the Final Office Action of 11/20/07, said arguments being presented in support of the currently amended claims 1, 3-7, 9-10, 12, 14-15, and newly added claims 16-19. However, after a careful consideration of the arguments presented and further scrutiny of the primary Aharoni reference, the Examiner must respectfully disagree, and maintain the applicability of the Aharoni reference as the basis of the grounds of rejection that follows.

After summarizing the currently stage of prosecution (RCE of 2/20/08: page 8, lines 4-22), highlighting the salient features of the instant invention as of this amendment (RCE of 2/20/08: page 8, lines 23-25; page 9, lines 1-19), and providing Applicant's interpretation of the applied reference (RCE of 2/20/08: page 9, lines 20-25; page 10, lines 1-12; page 11, lines 13-25; page 12, 1-18), the Applicant argues that Aharoni fails to generate GOPS having at least an I

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picture and a plurality of predictive P pictures, (RCE of 2/20/08: page 11, lines 1-12; page 12, lines 19-25; page 13, lines 1-23). The Examiner flatly disagrees. Aharoni discloses that a GOP are a collection of I, P, and B frames, with the ability of the P and B frames to be *fewer or more in number with relation to each other* (Aharoni: column 10, lines 35-45). The Examiner asserts that allowing for the fewest number of B frames supported by Aharoni is zero (i.e. no B-frames), particularly, since the reference discloses that B frames are the least important types of data and do not have to sent (Aharoni: column 10, lines 10-20) particularly if there are severe bandwidth constraints (Aharoni: column 12, lines 50-55). Accordingly, the Examiner maintains that Aharoni anticipates the limitation generating GOPs having at least an I picture and a plurality of P pictures, as in the claims.

Secondly, the Applicant argues that Aharoni fails to disclose storing the latest of the GOPs in a memory unit of the video transmission unit, the memory unit being commonly used via the transmission lines... as in the claims (RCE of 2/20/08: page 13, lines 16-18). The Examiner respectfully disagrees. It is duly noted since Aharoni determines packet loss event detection (Aharoni: column 13, lines 40-60), the storage of the most recent GOPs occurs in buffers until an ACK signal is received at the video transmission unit (Aharoni: column 12, lines 60-67). The copy of the most recent GOP is sent in a resend packet as needed (Aharoni: column 13, lines 1-10). Accordingly, the Examiner maintains that the limitation is met.

A detailed rejection follows below.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3-7, 9-10, 12, 14-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Aharoni et al., (hereinafter referred to as “Aharoni”).

Aharoni discloses a motion picture transmission method (Aharoni: figures 11-1 & 11-2, 12-1 & 12-2, and 13-14) for transmitting motion picture signal input from an input terminal to a plurality of video reception units (Aharoni: column 18, lines 14-25), respectively, through a video transmission unit and a plurality of transmission lines (Aharoni: column 18, lines 45-65), each of which has a different transmission speed (Aharoni: column 12, lines 1-26), said method comprising the steps of: generating a GOP (Aharoni: column 9, lines 20-27) having at least an Intra (I) picture data and a plurality of Predictive (P) picture data (Aharoni: column 10, lines 35-39: fewest B frames in a GOP sequence) based on said motion picture signal in said video transmission unit (Aharoni: column 8, lines 55-65); storing the latest of said GOPs (Aharoni: column 10, lines 35-50) in a memory unit (Aharoni: column 12, lines 60-67; column 13, lines 1-10) of said video transmission unit (Aharoni: column 11, lines 11, lines 30-45), said memory unit being commonly used via transmission lines (Aharoni: column 18, lines 45-60); and transmitting said I picture data and a different number of P picture data each of which is read up from said memory unit on a GOP unit basis (Aharoni: column 18, lines 20-30) consecutively in response to

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different transmission speeds (Aharoni: column 12, lines 40-60) to a plurality of video reception units (Aharoni: column 17, lines 17-38), respectively (Aharoni: column 11, lines 5-12), as in claim 1.

Regarding claim 3, Aharoni discloses wherein said video transmission unit encodes said motion picture signal based on either one of Motion Picture Experts Group MPEG-4 and MPEG-2 (Aharoni: column 18, lines 40-45), as in the claim.

Regarding claim 4, Aharoni discloses a motion picture transmission method wherein in the case where it is determined that said picture data motion picture signal comprises: at least first I picture data and second I picture data (Aharoni: column 10, lines 10, lines 35-50), a transmission of said P picture data subsequent to said first I picture data is cancelled in response to said transmission speed which is low (Aharoni: column 13, lines 15-35), and transmission is started from said second I picture data is transmitted subsequent to said first I picture data (Aharoni: column 12, lines 5-15), as in the claim.

Regarding claim 5, Aharoni discloses wherein when the number of said P picture data is changed in response to said transmission speed of said transmission line, the number of P picture data subsequent to said I picture data is changed in accordance with the transmission speed of said transmission line, said P picture data being continuous, and the changed number of said P picture data is transmitted (Aharoni: column 12, lines 40-60: skipped P frame), as in the claim.

Regarding claim 6, Aharoni discloses wherein said video transmission unit stores the number of I picture data and a plurality predetermined number of P picture data according to a request from in response to said transmission speed of said transmission line, and transmits said

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stored I picture data and P picture data are transmitted as stream data of a Group of Pictures (GOP) unit to said transmission line (Aharoni: column 10, lines 45-50), as in the claim.

Aharoni discloses a motion picture transmission system (Aharoni: figures 1-2, and 15), comprising: an input terminal to which a motion picture signal is applied (Aharoni: column 6, lines 35-50); a video transmission unit (Aharoni: column 11, lines 25-45), coupled to said input terminal, for encoding a motion picture signal (Aharoni: column 6, lines 55-60); a plurality of transmission lines (Aharoni: column 18, lines 44-65), coupled to said video transmission unit, for transmitting video data encoded in said video transmission unit, each of which has a different transmission speed (Aharoni: column 12, lines 10-20); and a plurality of video reception units, coupled to a plurality of said transmission lines, respectively, for receiving said video data transmitted via said transmission lines (Aharoni: column 18, lines 13-25), wherein said video transmission unit includes: generator for a GOP (Aharoni: column 9, lines 20-27) having at least an Intra (I) picture data and a plurality of Predictive (P) picture data (Aharoni: column 10, lines 35-39: fewest B frames in a GOP sequence), and a memory unit for storing the latest of said GOP (Aharoni: column 12, lines 60-67; column 13, lines 1-10), said memory being commonly used via said transmission lines (Aharoni: column 18, lines 40-60); and a selector, including a plurality of stream output units couples to a plurality of said transmission lines (Aharoni: column 18, lines 20-30), respectively, for selecting said I picture data and a different number of P pictures each of which is read out from said memory unit on a GOP unit basis and consecutively in response to said transmission speeds of a plurality of said transmission lines to transmit a plurality of said video reception units (Aharoni: column 13, lines 10-55), wherein said video

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transmission unit transmits the latest of said GOPs selected by each said stream output (Aharoni: column 12, lines 60-67; column 13, lines 1-10), as in claim 7.

Regarding claim 9, Aharoni discloses wherein the means for changing the number of said P picture data in accordance with response to said transmission speeds of a plurality of said transmission lines and transmitting the changed number of said P picture data includes means for changing the number of P picture data subsequent to said I picture data (Aharoni: column 12, lines 45-55: skip frames), as in the claim.

Regarding claim 10, Aharoni discloses wherein said image transmission unit further comprises: a memory-unit, said memory unit stores the number of I picture data and a plurality different number of said P picture data in response to said transmission speeds of a plurality of according to a request from said transmission lines, and wherein said video transmission unit converts said stored I picture data and P picture data into stream data of a Group of Pictures (GOP) unit and transmits said stream data to said transmission lines (Aharoni: column 10, lines 45-50), as in the claim.

Aharoni discloses a motion picture transmission apparatus (Aharoni: figures 1-2, and 15), comprising: an input terminal to which a motion picture signal is applied (Aharoni: column 18, lines 14-25); a coding unit coupled with said input terminal, for converting said motion picture signal into GOPs (Aharoni: column 9, lines 20-30) having at least Intra (I) picture data and a plurality of Predictive (P) picture (Aharoni: column 10, lines 35-39: fewest B frames in a GOP sequence); a memory unit for storing the latest of said GOPs (Aharoni: column 12, lines 60-67; column 13, lines 1-10); an output unit including a plurality of stream output units (Aharoni: column 18, lines 20-30) for outputting said I and P pictures (Aharoni: column 11, lines 30-45)

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each of which is read out from said memory unit on a GOP unit basis and consecutively (Aharoni: column 18, lines 30-40); a plurality of transmission lines, coupled to a plurality of stream output units (Aharoni: column 18, lines 40-60), for transmitting said I and P pictures, respectively (Aharoni: column 10, lines 20-30), each of which has a different transmission speed (Aharoni: column 12, lines 10-20); a plurality of video reception units, coupled to a plurality of said transmission lines, respectively, (Aharoni: column 18, lines 13-25); and a control unit for controlling said output unit, wherein said control unit controls the number of I picture data and a different number of P picture data output to output the latest of said GOPs including said I picture data and a different number of P pictures (Aharoni: column 10, lines 35-39: fewest B frames in a GOP sequence) from said I picture and a plurality of P pictures stored in said memory unit in response to said transmission speeds of said transmission lines (Aharoni: column 12, lines 45-55), said memory unit being commonly used to a plurality of said transmission lines (Aharoni: column 18, lines 40-60), as in claim 12.

Regarding claim 14, Aharoni discloses wherein the means for changing the number of said P picture data in accordance with response to said transmission speeds of a plurality of said transmission lines and transmitting the changed number of said P picture data includes means for changing the number of P picture data subsequent to said I picture data (Aharoni: column 12, lines 45-55: skip frames), as in the claim.

Regarding claim 15, Aharoni discloses wherein said image transmission unit further comprises: a memory-unit, said memory unit stores the number of I picture data and a plurality different number of said P picture data in response to said transmission speeds of a plurality of according to a request from said transmission lines, and wherein said video transmission unit

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converts said stored I picture data and P picture data into stream data of a Group of Pictures (GOP) unit and transmits said stream data to said transmission lines (Aharoni: column 10, lines 45-50), as in the claim.

Regarding claim 19, Aharoni discloses that the different number of said P pictures corresponds the number requested from each of said video reception units, and wherein in said step of transmitting, said I picture and a different number of P pictures are transmitted from said video transmission unit to each of said video reception units (Aharoni: column 11, lines 5-25) after said video transmission unit receives the request from each of said video reception units (Aharoni: column 11, lines 30-50), as in the claims.

Regarding claims 17-18, Aharoni discloses wherein said I and P pictures stored in said memory unit are updated whenever said request from each of said video reception units receives in said video transmission unit, and the updated I and P pictures are transmitted in response to said request from each of said video reception units (Aharoni: column 13, lines 1-10), as in the claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aharoni et al. (hereinafter referred to as "Aharoni") in view of Firestone.

Aharoni discloses a motion picture transmission method (Aharoni: figures 11-1 & 11-2, 12-1 & 12-2, and 13-14) for transmitting motion picture signal input from an input terminal to a plurality of video reception units (Aharoni: column 18, lines 14-25), respectively, through a video transmission unit and a plurality of transmission lines (Aharoni: column 18, lines 45-65), each of which has a different transmission speed (Aharoni: column 12, lines 1-26), said method comprising the steps of: generating a GOP (Aharoni: column 9, lines 20-27) having at least an Intra (I) picture data and a plurality of Predictive (P) picture data (Aharoni: column 10, lines 35-39: fewest B frames in a GOP sequence) based on said motion picture signal in said video transmission unit (Aharoni: column 8, lines 55-65); storing the latest of said GOPs (Aharoni: column 10, lines 35-50) in a memory unit (Aharoni: column 12, lines 60-67; column 13, lines 1-10) of said video transmission unit (Aharoni: column 11, lines 11, lines 30-45), said memory unit being commonly used via transmission lines (Aharoni: column 18, lines 45-60); and transmitting said I picture data and a different number of P picture data each of which is read up from said memory unit on a GOP unit basis (Aharoni: column 18, lines 20-30) consecutively in response to different transmission speeds (Aharoni: column 12, lines 40-60) to a plurality of video reception units (Aharoni: column 17, lines 17-38), respectively (Aharoni: column 11, lines 5-12), as in claim 1. However, Aharoni fails to disclose wherein said video transmission unit further includes a plurality of Real Time Transport Protocol (RTP) packet processing units, each of which is coupled to said compression processing unit, and a Transmission Control Protocol-User Datagram Protocol (TCP-UDP) processing unit coupled with said transmission lines as specified. Firestone discloses the use RTP packetization protocols (Firestone: column 1, lines 40-60) as a part of an MPEG streaming unit (Firestone: column 7, lines 5-55) in order to make efficient use

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of limited bandwidth (Firestone: column 1, lines 15-20) will allowing for real time streaming (Firestone: column 3, lines 5-58). Given the Firestone teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the RTP packetization teaching of Firestone into the Aharoni system in order to allow for the composite system address the needs for real time streaming across a network while dealing with constrained bandwidths. Accordingly, the Aharoni system, now incorporating the Firestone RTP packetization, has all of the features of claim 19.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao
Primary Examiner
Art Unit 2621

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